REMARKS

In view of both the amendments presented above and the following discussion, the Applicant submits that none of the claims now pending in the application is obvious under the provisions of 35 USC §§ 102 and 103. Thus, the Applicant believes that all of these claims are now in allowable form.

If the Examiner believes that there are any unresolved issues in any of the claims now pending in the application, the Examiner is urged to telephone Alberta A. Vitale, Esq. (Reg. No. 41,520) at (203 469-0696 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Drawing Objections

The Drawings were objected by the Office Action for being "vague and not elaborate enough to convey inventive concept." Correction was required since it would "not be held in abeyance." (Office action, page 2, Drawings). Applicant has amended the drawings to overcome the objection by canceling Figures 1 and 2, sheet 1/1 and replacing the drawing sheet with a new sheet 1/1 containing Figures 1 and 2.

In Figures 1 and 2, the crossed lines representing "distributors" (Figure 1, element 2 and Figure 3, elements 2, 10 and 12) have been deleted and are replace by rectangles.

Also, the reference numeral "6" identifying "multiplexing equipment" has been added to Figure 2; and an input portion was shown at "telephone exchange 3" of Figure 2 by adding a line and the word "input" to element 3. The amendments correspond to the description in the specification.

Applicant respectfully requests entry of the new drawing sheet and withdrawal of the objection. If further amendment is deemed necessary by the Examiner, Applicant respectfully requests more specificity with respect to exactly what the Examiner believes to be "vague and not elaborate enough to convey inventive concept."

Specification Objections

The Specification was objected to by the Office action because the "title of the invention is not descriptive." Applicant has amended the title as required to be "clearly indicative of the invention to which the claims are directed." (Office action, page 2, Specification). Applicant has also amended the Abstract page because it includes the title. Applicant respectfully requests cancellation of the abstract page and replacement with the new abstract page attached hereto in Appendix B. Applicant respectfully notes that by the amendment to the title, the objection is overcome.

Claim Amendments

No amendments have been made to the claims.

Rejections under 35 USC § 102

The Office action has rejected claims 5-7 under the provisions of 35 USC § 102 as being anticipated over the teachings in the Li patent (United States patent 6,021,088 issued to Jim Y. Li et al on Jan. 4, 2000 (hereinafter Li '088)). This rejection is respectfully traversed since Li '088 does not teach each and every element of Applicant claimed invention.

Applicant will address the rejection as it pertains to independent claim 5 from which claims 5, 6 and 8 depend.

Independent Claim 5

Independent claim 5 is directed to:

> System for establishing a permanent connection between the Internet and a user subscribed to the Internet (See col. 2, lines 19-39), said system comprising a **switching PoP** having incoming lines through which switched telephone traffic enters (See col. 5, lines 57-67), characterized in that said system further comprises a PoP manager (i.e., NOC) (See col. 5, lines 24-45), and inputs which are not connected to the telephone exchange and which are permanently connected to a connection at a subscriber, said subscriber being connected through said connection (i.e., NOC) (See col. 5, lines 30-56), inputs and **switching PoP** to an ISP on the basis of an instruction (i.e.,

> hardware or software for management) (See col. 5, lines 34-46))from the PoP manager (i.e., NOC).

(Emphasis added and rejection citations to Li '088 included using parenthesis as set out in the Office action. Element numbering was removed for simplification).

Applicant notes that from the format of the rejection it is difficult to determine exactly what is meant by the citations. Applicant has assumed that of the citations of the rejection is being applied to the claim language preceding each citation, and that the Examiner believes that each citation teaches the claim language preceded by it. These assumptions are made for the sake of prosecution efficiency. Applicant bases the arguments upon these assumption and note that Applicant does not believe that each citation teaches the preceding claim language.

In the remarks below, Applicant traverses the Li '088 reference by showing that Li '088 does not teach each and every element for which Li '088 was cited against in the claim.

Permanent Connection

The Office action cites Li '088 at col. 2, lines 19-39 against the claim language "**permanent connection** between the Internet and a user subscribed to the Internet" (claim 5, emphasis added). Applicant has reviewed the

citation and repeat the citation, for convenience, as follows:

> A home or casual use customer who only dials up to connect to the Internet occasionally, may only need a dynamic or temporary address for that session only. This dynamic IP address is unique for that user for only a particular transaction. Once the user has disconnected from the Internet, the dynamic IP address may be reassigned to another user. However, providers of services or information on the Internet require a permanent or static IP address so that other users may access this information at any time using a known address. Corporate customers having a web site and a domain name may also require one or more static IP addresses. Another configuration variable is that customers may choose between a variety of types of connections to the Internet that are offered by an ISP. For example, a casual use customer may choose to use a modem on a dial-up line to access the Internet, or may choose to use an ISDN (integrated services digital network) adapter in order to access the Internet over a dial-up ISDN line. A corporate or heavy use customer may wish to utilize a **permanent leased line connection** to the Internet that **uses frame relay technology for high-speed access.** (*Emphasis added*).

Applicant notes that frame relay technology is a network protocol that relies on packet switching technology. Through the use of packet switching technology messages are divided into packets and then sent. Each packet is then transmitted individually and each packet can follow different routes to its destination. Once all the packets

forming a message arrive at the destination, the packets are recompiled into the original message. Applicant respectfully notes that this is not the same as "permanent connection between the Internet and a user subscribed to the Internet" (Claim 5).

Switching Pop

The Office action cites Li '088 at col. 2, lines 57-67 against the claim language "said system comprising a **switching PoP** having incoming lines through which switched telephone traffic enters" (claim 5, emphasis added). Applicant has reviewed the citation and recite the citation as follows:

> FIG. 3 illustrates an embodiment of a POP 42 as shown in FIG. 2. **POP 42 has a connection 44 to either another POP, a NOC** of an IP network, or even directly to a global carrier. POP 42 also has feeder lines 48 for connecting to various Internet customers. The type of feeder line 48 may vary depending upon the service desired by the Internet customer. By way of example, a customer may connect to the POP using an analog modem 52 over a switched dial-up telephone line. This line may be a plain old telephone service (POTS) line at up to speeds of 56 Kbps. A customer may also connect to a POP using an ISDN adapter 54 that connects over a switched digital telephone line. (Emphasis added).

Applicant's **switching Pop** is different from the Pop of the above citation. Applicant's switching Pop handles traffic to and from end-users that are subscribed to

different ISP's. The switching Pop routes traffic to a certain target ISP dependent on characteristics of the traffic. For example, in a dial-in situation an end-user A uses a specific telephone number that is related to an ISP A to connect to the switching Pop after which the switching Pop will route the traffic from end-user A to ISP A. Another end-user B will use another telephone number that is related to an ISP B to connect to the same switching Pop after which the switching Pop will route the traffic from end-user B to ISP B. **In contrast, the Pop referred to by the citation to Li '088 is dedicated to a specific ISP, and is not capable of routing traffic to an ISP dependent on the nature of the traffic.** The Pop 42 in Li '088 is a Pop **related to one specific ISP**.

The difference explained above can also be concluded from review of Li '088 Figures 2, 3, 4, 8 and 9. In Figure 4, for example, the Pop 42 is depicted as part of the domain of one specific ISP. It is also noticed that Figure 2 of Li '088 is ambiguous since a Pop 42 is also depicted as a network node.

NOCs/PoPs

With respect to the NOCs of Li '088 the Office action provides the citations listed in Table A below along side the claim language to which the Office action corresponded the citation:

Table A:

Claim Language	Citation from Office Action
"characterized in that said system further comprises a PoP manager"	(i.e., NOC) (See col. 5, lines 24-45)
"said system comprising a switching PoP having incoming lines through which switched telephone traffic enters"	(i.e., NOC) (See col. 5, lines 30-56)
"from the PoP manager"	(i.e., NOC)

In addition to the Office action citations listed in **Table A**, the Office action also cites (i.e., hardware or software for management) (See col. 5, lines 34-46) against Applicant's claim language "inputs and **s**witching PoP to an ISP on the basis of an **instruction**" (claim 5, emphasis added). As can be seen from **Table A**, the Office action sites col. 5 of Li '088 at Lines 24-56 which is an entire paragraph referencing Figure 2 of Li '088, and in particular Li '088s NOCs against Applicant's claim language that includes the term "PoP". That cited portion of Li '088 is reproduced as follows:

> FIG. 2 illustrates in greater detail an IP network 30 as shown in FIG. 1. Typically, an Internet service provider offers local access to the Internet to its customers through such an extended IP network 30 that consists of perhaps hundreds of points of presence that are connected by high-speed dedicated lines that are leased from a telecommunications provider. The IP

> network 30 may be one of many IP networks that are managed by an Internet service provider. IP network 30 contains any number of points of presence (POPs) 42 that are interconnected with each other and to a network operation center **(NOC) 40**. The network operations center 40 contains hardware, software and systems for managing and monitoring the IP network 30. IP network 30 connects over one or more high-speed lines 46 to a global carrier 16. Typically, each **POP 42** is connected to another **POP** and eventually to the **NOC** via a high-speed leased line 44 using a T-1 or T-3 circuit. Each point of presence 42 has any number of feeder lines 48 that connect the **POP** to a customer 50. The Internet customer 50 may be one of a wide variety of Internet customers. By way of example, customer 50 may be a casual user dialing in from their home with a single computer, a corporate user, a single computer in a corporation, a router which is used to connect any number of other computers in a local area network to the Internet, a computer used for connecting a corporate intranet to the Internet, or other similar connection. Feeder lines 48 may be dial-up or leased lines, or other type. In general, the communication lines shown take a wide variety of forms. By way of example, lines may be traditional telephone copper wire pairs, a permanently installed wire, a cable system coaxial cable, fiber optic cable, a microwave or other electromagnetic transmission device, or other communication line. (Emphasis added with respect to NOCs and the Li '088s POPs).

With respect to the above noted rejections it should be considered that if there is a **permanent connection** instead of a **dial-in connection** between an end-user and the switched PoP, there is no telephone number that can be used

as a reference for the switched Pop to route the traffic to a certain target ISP. According to Applicant's claims, the PoP manager (8) instructs the switching Pop how to route the traffic. A POP (as disclosed in Li '088) will not need such an instruction since there is a predetermined ISP to which the traffic should be routed. Therefore, as can be seen from Figure 2, the Li '088 NOC 40 is not the same as Applicant's PoP manager (8). The Li '088 NOC 40 can send instructions to POPs, but these instructions do not concern the routing of traffic by switching PoPs to ISPs.

Applicant also notes that generally, a NOC is a physical space from which typically large telecommunications network is managed and therefore is not the same as Applicant's switching PoP.

Thus, for all of the above stated reasons, Li '088 does not teach each and every element of Applicant's invention of claim 5. Applicant respectfully requests that the 35 USC § 102 of claim 5 be withdrawn.

Claims 6 and 7

Claims 6 and 7 depend directly from independent claim 5. For the reasons stated above with respect to the 35 USC § 102 rejection of claim 5, Applicant respectfully requests that the 35 USC § 102 rejection of claims 6 and 7 be withdrawn.

Further, with respect to dependent claim 6, the rejection stated "(i.e., there exist **many forms of connections** in which the user can be connected as including but not limited to **directly being connected to the switching PoP**)", (See col. 5, lines 38-56). (Emphasis added). Claim 6 is recited as follows:

> System according to claim 5, characterized in that the inputs of the PoP not being connected to the telephone exchange can be executed as two-wire connections in such a way that the subscriber is **directly connected to the switching PoP** and is **switched on the basis of an instruction** of the PoP manager. (Emphasis added and element numbering removed from claim for simplification).

Applicant notes that the citation does not teach the invention of Claim 6. The Office action is focused on "directly connected" while ignoring the aspect of the invention "switched on the basis of an instruction of the PoP manager." Nowhere in the cited col. 5, lines 38-56 is there any teaching of Applicant's "switched on the basis of an instruction to the PoP manager."

Claim 7

Dependent claim 7, the Office action states that Li '088 discloses:

> "standard multiplexing equipment (i.e., distribution router) (See Column 6 Lines 13-25)";

> "employed to which the subscriber is connected by a two-wire connection (i.e., copper wire pairs) (See Column 5, Lines 49-56)";
>
> "said multiplexing equipment being connected to said switching PoP (i.e., POP)(See Column 6 Lines 13-20)";
>
> "and is switched (i.e., managed)"; and
>
> "on the basis of an instruction of the PoP manager (i.e., NOC (See Column 5, Lines 34-56)."

For the sake of efficiency, Applicant will not address each of the individual citation. Applicant respectfully notes that the prior art reference must disclose each element of the claimed invention "arranged as in the claim" Lindermann Maschinenfabrick GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984). Even upon assuming arguendo that Li '088 includes all of the elements that are claimed by Applicant, since the arrangement of Applicant's claimed elements is different from the arrangement of Li '088 elements, anticipation is not present.

Importantly, Applicant notes that nowhere in Li '088 is there any teaching of Applicant's "**switching PoP ... switched on the basis of an instruction** of the PoP manager." (Claim 6, emphasis added). Therefore, Applicant respectfully requests that the rejection be withdrawn.

Thus, for all of the above stated reasons Li '088 does not teach each and every element of Applicant's invention of claims 6 and 7.

Rejections under 35 USC § 103

The Office action has rejected claim 8 under the provisions of 35 USC § 103 as being obvious over the teachings in Li '088 taken in view of the Sofman patent (United States patent 5,937,042 issued to 5,937,042 et al on Aug. 10, 1999 (hereinafter Sofman '042)). This rejection is respectfully traversed.

The rejection specifically states, at page 4 of the Office Action, that:

Li discloses the claimed invention as described above [referring to the remarks of the 35 USC § 102 rejection of the Office action]. However, Li does not explicitly teach the PoP is switchable by a PoP manager at a distance. Sofman teaches PoP is switchable by a PoP manager (i.e., EO) at a distance. [omitting several citations to Sofman '042 which are recited below], wherein rehome refers to a network change which involves moving telephone service traffic from one switching center to a different switching center. Likewise, the term rehome or rehoming, used in a verb sense, is referred to as making the network change of moving telephone service traffic from one switching center to a different switching center.

The Sofman '042 citation, at col. 10, line 63 to col. 11, line 9 states:

With regard to distance constraints, if a route distance between an EO and IXC switch is great, undesirable echo effects must be considered. Rehoming an RCG to a new switch is constrained to some distance limitation. For example, a non-microwave route distance between an RCG and IXC switch should not exceed a reasonable limit such as 600 miles. The distance of circuits in a particular RCG includes adding the distance between the switch and POP to the distance from POP to the most remote EO. However, if an echo-canceler (or echo suppresser) is used, the distance limit is extendible. In case of strong COI between an RCG A and RCG B that is homed to a remote switch S, a trade-off exists between COI and the cost of rehoming A to the remote switch S with echo-canceler(s).

Further Sofman '042 is cited at col. 30, lines 1-3, which states: "Distance actually refers to distance between the switch and opposite terminating end (usually POP) of the particular RCG."

In contrast to the remarks of the rejection (recited above), Applicant notes that Sofman '042 actually refers to distance diverting traffic streams (which are network changes). The POP manager (8) does something different, i.e., it instructs the switching POP how to route traffic that is received via a permanent connection between

an end-user and the switched POP. Hence Li '088 in view of Sofman '042 to not make Applicant's claim 8 obvious.

Additionally, with respect to claim 8, which depends from claim 1, the rejection of which under 35 USC § 102 is traversed above, based upon that traversal and the dependency of claim 8, Applicant further notes that claim 8 is not made obvious by Li '088 in view of Softman '042.

Conclusion

Thus, the Applicant submits that none of the claims, presently in the application, is anticipated under the provisions of 35 USC § 102 or obvious under the provisions of 35 USC § 103. Furthermore, the Applicant(s) also submit that objections to the specification and the drawings have also been overcome.

Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,

April 12, 2004

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